

Docket No.: 069978-0012

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	:	Customer Number: 20277
	:	
Zhiqun HE, et al.	:	Confirmation Number: 7628
	:	
Patent No.: 7,505,481	:	Issue Date: March 17, 2009
	:	
Application No.: 10/765,204	:	Group Art Unit: 2616
	:	
Filed: January 28, 2004	:	Examiner: Ian N. Moore
	:	
For:		SYSTEM AND METHOD OF ACCESSING AND TRANSMITTING DIFFERENT DATA FRAMES IN A DIGITAL TRANSMISSION NETWORK

REQUEST FOR CERTIFICATE OF CORRECTION UNDER 37 CFR 1.322

Mail Stop Certificate of Correction
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In reviewing the above-identified patent, printing errors were discovered therein requiring correction in order to conform the Official Record in the application.

The errors noted are set forth on the attached copy of form PTO-1050 Rev. 2-93 in the manner required by the Commissioner's Notice.

Specifically, in the drawings, Figs. 4, 4A, 5, 6, and 7 were omitted from the printed patent. These figures should have been published in addition to the Replacement Drawing sheets for Figs. 1, 2A, 2B, 3, 4(F), 4A(F1), 4A(F2), 5(F), 6(F1), and 7(F), which were submitted on January 29, 2008. Additionally, correct the number of drawing sheets indicated on the title page of the patent from "8 Drawing Sheets" to --11 Drawing Sheets--. Attached is a copy of the omitted drawings

10/765,204

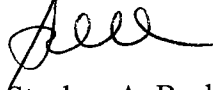
which were submitted on September 14, 2004, as well as a copy of the Amendment filed January 29, 2008, with Replacement Sheets of Drawings.

The change requested herein occurred as a result of printing the Letters Patent and the Certificate should be issued without expense under Rule 322 of the Rules of Practice. Accordingly, Applicants request issuance of the Certificate of Correction.

Please charge any shortage in fees due in connection with the filing of this paper to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

McDERMOTT WILL & EMERY LLP


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Date: October 21, 2009

**Please recognize our Customer No. 20277
as our correspondence address.**

WDC99 1784347-1.069978.0012

**UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION**

PATENT NO : 7,505,481
APPLICATION NO. : 10/765,204
ISSUE DATE : March 17, 2009
INVENTOR(S) : Zhiqun HE, et al.

Page 1 of 1

It is certified that an error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

ON THE TITLE PAGE OF THE PATENT:

Below Item "(57) Abstract, change the number of drawings from "8 Drawing Sheets"
to --11 Drawing Sheets--.

IN THE DRAWINGS:

After Fig. 3 (Sheet 2) and before Fig. 4(F) (Sheet 3), insert the attached drawing sheets.

MAILING ADDRESS OF SENDER (Please do not use customer number below):

600 13th Street, N.W.
Washington, D. C. 20005-3096

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: ATTENTION Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

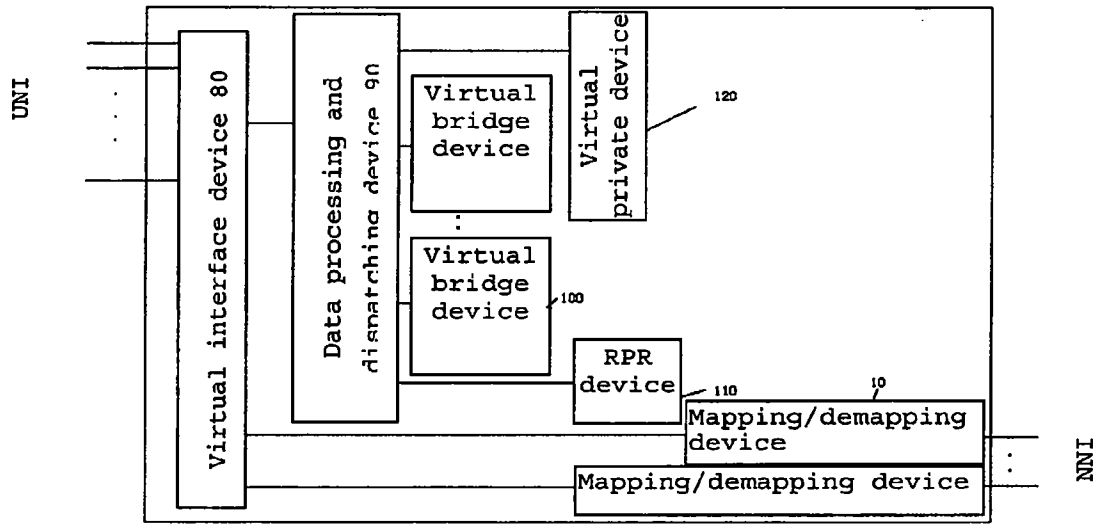


Fig.4

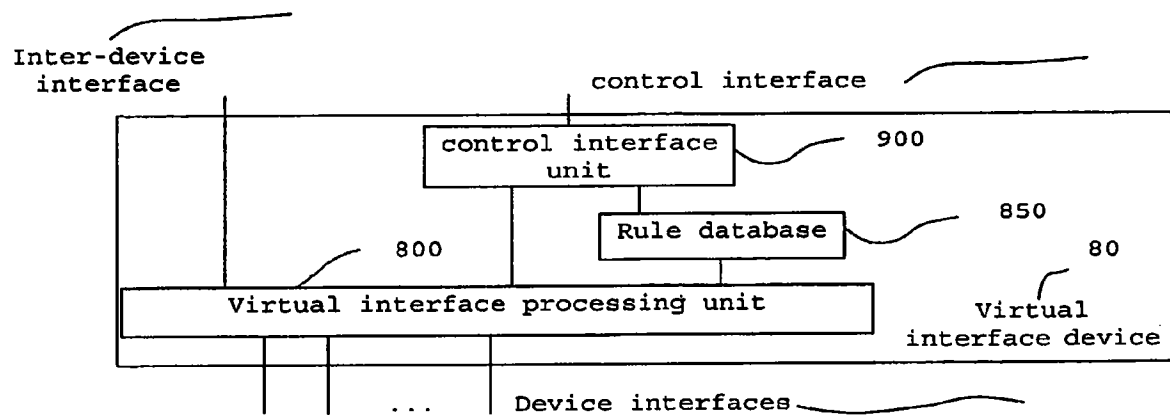


Fig.4A

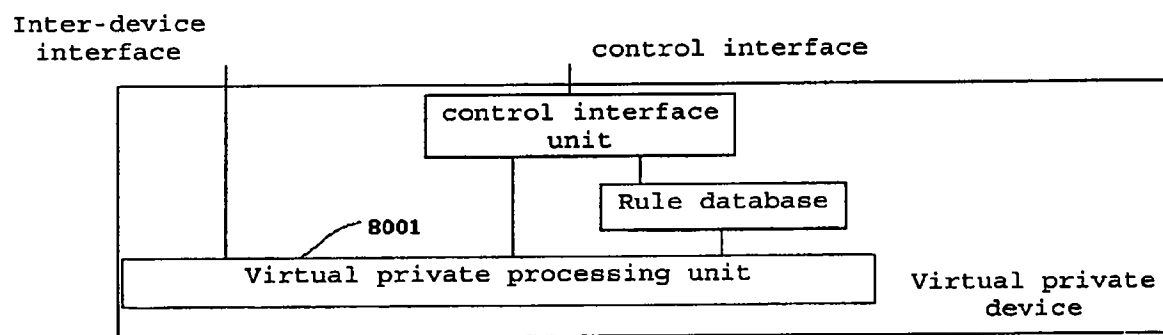


Fig.5

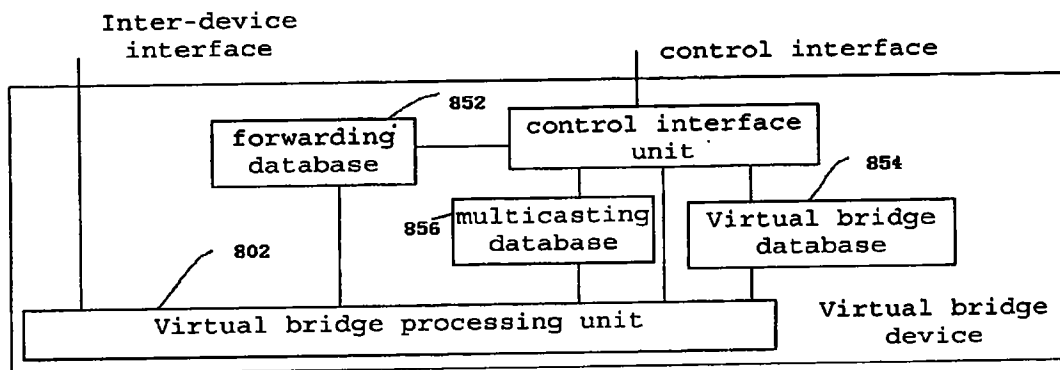


Fig.6

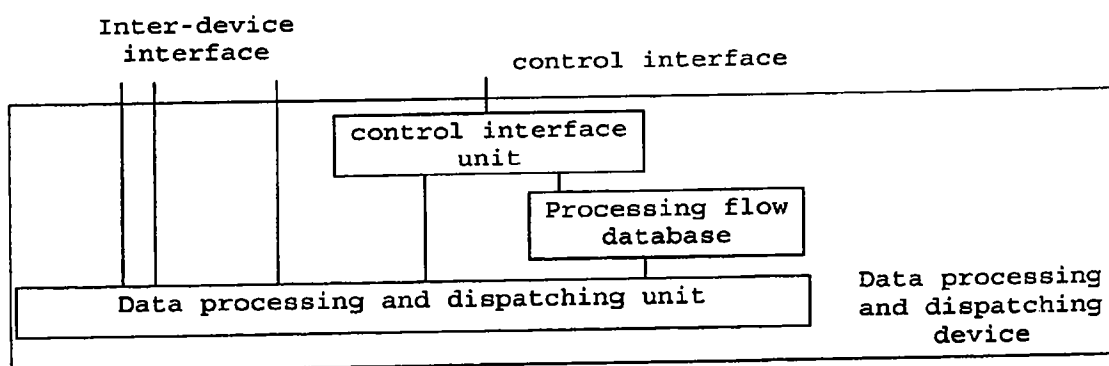


Fig.7

Request for Certificate of Correction
Patent No.: 7,505,481
Issued: March 17, 2009

SUPPORT DOCUMENT

Amendment of 1/29/2008 with
8 Replacement Drawing Sheets

Docket No.: 069978-0012

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	:	Customer Number: 20277
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Application No.: 10/765,204	:	Group Art Unit: 2616
	:	
Filed: January 28, 2004	:	Examiner: Ian N. Moore
	:	
For:		SYSTEM AND METHOD OF ACCESSING AND TRANSMITTING DIFFERENT DATA FRAMES IN A DIGITAL TRANSMISSION NETWORK

AMENDMENT

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Office Action dated October 29, 2007, having a three-month shortened statutory period for response set to expire on January 29, 2008, reconsideration of the above-identified application is respectfully requested in view of the following amendment and remarks.

AMENDMENT TO CLAIMS

Please amend the claims as follows:

1. (Currently amended) A system for accessing and transmitting different data frames in a digital transmission network ~~for accessing and transmitting different data frames~~, comprising:

at least a user-network interface (UNI) from plurality of UNIs, which is used to couple with ~~[[the]]~~ a user's network; and/or at least a network-network interface (NNI) from plurality of NNIs, which is used to couple with said digital transmission network to transfer data; and

a data converting device, which is coupled with said UNIs and said NNIs to convert data formats between said UNIs, data formats between said NNIs, or data formats between said NNIs and said UNIs;

~~[[Said]]~~ said data converting device comprises a virtual interface device, said virtual interface device comprises: at least two device interfaces which comprises UNIs or NNIs, for inputting or outputting data frames; a virtual interface processing unit, which couples with said device interfaces to process said data frames and exchange said data frames between said virtual interface processing unit and corresponding device interfaces; a rule database, which couples with said virtual interface processing unit and stores rules corresponding to different data frames, said virtual interface processing unit determines ~~[[the]]~~ a processing flow according to the classification of data frames under said rules; a control interface unit, which couples with said rule database and said virtual interface processing unit to control ~~[[them]]~~ said rule database and said virtual interface processing unit; an inter-device interface, which couples with said virtual interface processing unit to couple with external devices to exchange data,

wherein a corresponding relationship between said device interfaces and said rules is 1:
N, N being a natural number greater than 1, and each device interface is configured as a device
interface meeting a requirement of the data interface corresponding to any of the rules.

2. (Cancelled)

3. (Currently amended) A system for accessing and transmitting different data frames in a digital transmission network according to claim 1 ~~or 2~~, wherein said control interface unit provides an external control interface, through which ~~an~~ to inspect the operation of the virtual processing unit is inspected, and ~~[[add]]~~ addition, delete deletion, modify modification and ~~search~~ searching operations are performed to rules in said rule ~~databases~~ database.

4. (Currently amended) A system for accessing and transmitting different data frames in a digital transmission network according to claim 3, wherein the rule comprises device interface number, data frame type number, data frame address offset, data frame type value, and data frame comparison mask, which provides relevant processing and control parameters when said virtual interface processing unit processes said data frames.

5. (Currently amended) A system for accessing and transmitting different data frames in a digital transmission network according to claim 1, wherein said device interfaces connect with said UNIs or said NNIs, ~~[[the]]~~ a corresponding relation between said device interfaces and said UNIs or said NNIs is 1:1, ~~and said inter-device interface connects with said data processing and dispatching device.~~

6. (Currently amended) A method of accessing and transmitting different data frames in a digital transmission network through the system of claim 1, ~~said system comprising a data converting device comprising a virtual interface device, wherein said method comprises~~ comprising the following steps:

Searching for a rule corresponding to said device interface;

Determining whether said rule is found ~~if not, ending the process;~~

If yes, obtaining ~~[[the]]~~ type information of the data frames;

determining whether said type information complies with ~~[[the]]~~ a second rule in the rules;

If not, searching for the next rule corresponding to the device interface, and determining again whether said rule is found; and

If yes, modifying said data frames information, outputting the data frames via the inter-device interface, ~~and then ending the process.~~

7. (Currently amended) A method of accessing and transmitting data frames in a digital transmission network according to claim 6, wherein when the data frame enters the device via the inter-device interface, said virtual interface device also performs the following steps:

Extracting the type information of the data frames, and searching for corresponding rule in the rule database according to said type information;

If the rule is not found, discarding said data frames ~~and ending the process;~~

If the rule is found, modifying said data frames information, and sending the data frames to a corresponding device interface according to the rule.

8. (Currently amended) A method of accessing and transmitting data frames in a digital transmission network according to claim 6, wherein the rule database is searched according to the number of a device interface receiving the data frames.

9. (Original) A method of accessing and transmitting data frames in a digital transmission network according to claim 6, wherein said step of the rule being not found comprises the step of outputting a report and discarding said data frames.

10. (Currently amended) A method of accessing and transmitting data frames in a digital transmission network according to claim 6, wherein the step of obtaining the type information of the data frames comprises: read ~~[[the]]~~ information at ~~[[the]]~~ an address offset according to the address offset of the data frame frames ~~address offset~~, and perform "AND" operation between said read information and a data frame comparison mask in the rule.

11. (Original) A method of accessing and transmitting data frames in a digital transmission network according to claim 10, wherein the step of determining whether the type information complies with the second rule in the rules comprises the following step: comparing the type information with the data frame type value in the rules.

12. (Currently amended) A method of accessing and transmitting data frames in a digital transmission network according to claim 10, wherein the step of modifying the data

frames information comprises the following step: inserting [[the]] data type number information at [[the]] a head position of the data frames.

13. (Currently amended) A method of accessing and transmitting data frames in a digital transmission network according to claim 7, wherein the step of extracting the type information of the data frames comprises the following step: extracting [[the]] data type number information at [[the]] a head position of the data frames.

14. (Currently amended) A method of accessing and transmitting data frames in a digital transmission network according to claim 13, wherein the step of searching corresponding rule in the rule database comprises the following step: searching in the rule database with [[the]] an index of the data frame type number.

15. (Original) A method of accessing and transmitting data frames in a digital transmission network according to claim 14, wherein the step of modifying the data frame information and sending the data frames to corresponding device interfaces according to corresponding rules comprises the following steps: deleting the data type number information at the head position; and sending the data frames to corresponding device interfaces according to the device interface number in the rule.

16. (New) A virtual interface device comprising: at least two device interfaces which comprises user-network interfaces (UNIs) or network-network interfaces (NNIs), for inputting or outputting data frames; a virtual interface processing unit, which couples with said device

interfaces to process said data frames and exchange said data frames between said virtual interface processing unit and corresponding device interfaces; a rule database, which couples with said virtual interface processing unit and stores rules corresponding to different data frames, said virtual interface processing unit determines a processing flow according to the classification of data frames under said rules; a control interface unit, which couples with said rule database and said virtual interface processing unit to control said rule database and said virtual interface processing unit; an inter-device interface, which couples with said virtual interface processing unit to couple with external devices to exchange data,

wherein a corresponding relationship between said device interfaces and said rules is 1: N, N being a natural number greater than 1, and each device interface is configured as a device interface meeting a requirement of the data interface corresponding to any of the rules.

AMENDMENT TO THE ABSTRACT OF THE DISCLOSURE

Please amend the Abstract of the Disclosure as follows:

A system accessing and transmitting different data frames in a digital transmission network for accessing and transmitting different data frames, ~~comprising~~ including: at least a user-network interface (UNI), which is used to couple with the user's network; at least a network-network interface (NNI), which is used to couple with ~~[[said]]~~ the digital transmission network to transfer data; a data converting device, which is coupled with ~~[[said]]~~ the UNIs and ~~[[said]]~~ the NNIs to convert data formats between ~~[[said]]~~ the UNIs, data formats between ~~[[said]]~~ the NNIs, or data formats between ~~[[said]]~~ the NNIs and ~~[[said]]~~ the UNIs; wherein ~~[[said]]~~ the data converting device ~~comprises~~ includes a virtual interface device, ~~[[said]]~~ the virtual interface device ~~comprises~~ includes: at least two device interfaces, a virtual interface processing unit, a rule database, a control interface unit and an inter-device interface, so as to improve access ability of the device.

AMENDMENT TO THE DRAWINGS

FIGS. 1, 2A, 2B, and 3 have been amended to include a legend "Prior Art." FIGS. 4(F) and 4A(F1) have been amended to include a reference numeral "7." FIG. 4A(F2) has been amended to include a reference numeral "6." FIG. 5(F) has been amended to include a reference numeral "12." FIG. 6(F1) has been amended to include reference numerals "11" and "17." FIG. 7(F) has been amended to include a reference numeral "6." Replacement figures incorporating these amendments are being submitted concurrently herewith.

REMARKS

Claims 1 and 3-16 are pending in this application, with claims 1 and 16 being independent. Claims 1, 3-8, 10, and 12-14 have been amended. Claim 16 has been added. No new matter has been introduced by the present amendments or added claim. For the reasons set forth below, Applicants respectfully submit that all pending claims as currently amended are patentable over the cited prior art.

Drawings

FIGS. 1, 2A, 2B, 3, 4(F), 4A(F1), 4A(F2), 5(F), 6(F1), and 7(F) were objected to due to minor typographical errors. FIGS. 1, 2A, 2B, 3, 4(F), 4A(F1), 4A(F2), 5(F), 6(F1), and 7(F) have been amended to overcome this objection. Replacement figures incorporating these amendments are being submitted concurrently herewith.

Abstract of the Disclosure

The Abstract of the Disclosure was objected to for minor typographical errors. The Abstract of the Disclosure has been amended to overcome this objection.

Claim Objections

Claims 1-15 were objected to due to various informalities. The claims have been amended to overcome this objection. These amendments, among others, include replacing the recitation "the information" in claim 10 with "information" at its first occurrence. Applicants respectfully submit that "the information" recited in claim 10 is different from the "type information" also recited therein. Indeed, the "type information" is obtained by performing an

AND operation between “the information” read at the address offset and a data frame comparison mask in the rule. Therefore and in contrast to the Examiner’s suggestion, Applicants have not change the recitation “the information” with the “type information” in claim 10.

Claim rejections – 35 U.S.C. § 112

Claims 1-15 were rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. The claims have been amended to overcome this rejection. Along these lines, claim 6 has been amended to more clearly indicated that claim 6 is a method claim.

Double Patenting

Claims 1, 3, and 5 were provisionally rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 1, 6, and 7 of co-pending U.S. Patent Application No. 10/765,283 (“He ‘283”) in view of U.S. Patent Application Publication Number 2004/0076166 (“Patenaude”). Additionally, claims 1, 3, and 5 were provisionally rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 1, 6, and 7 of co-pending U.S. Patent Application Number 10/765,205 (“He’205”) in view of Patenaude. Claim 1 has been amended to overcome these rejections. In particular, claim 1 has been amended to include features of claim 2, which is considered allowable over the cited prior art. For at least this reason, Applicants respectfully request reconsideration and withdrawal of these rejections.

Allowable Subject Matter

Applicant notes with appreciation the indication of allowable subject matter recited in claims 2-4 and 6-15. In reliance on the Examiner's assertion, the limitations of allowable claim 2 have been incorporated into independent claim 1. Therefore, Applicants respectfully request reconsideration and allowance of claim 1 along with its dependent claims.

New Claims

Independent claim 16 is newly added and includes the limitations of allowable claim 2. Therefore, for at least the reasons presented above with respect to claim 1, Applicants respectfully request consideration and allowance of claim 16.

Claim Rejections – Under 35 U.S.C. § 102(e)

Claims 1 and 5 were rejected under 35 U.S.C. § 102(e) as being anticipated by Patenaude. This rejection is rendered moot in view of the amendments incorporating allowable claim 2 into claim 1.

Conclusion

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication for which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

Application No.: 10/765,204

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

McDERMOTT WILL & EMERY LLP



Bernard P. Codd

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Facsimile: 202.756.8087
Date: January 29, 2008

**Please recognize our Customer No. 20277
as our correspondence address.**

Replacement Sheet

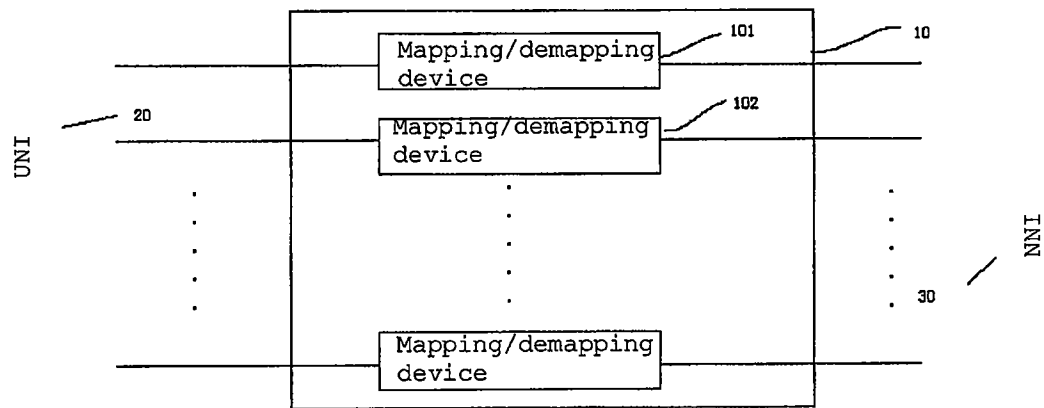


Fig.1 Prior Art

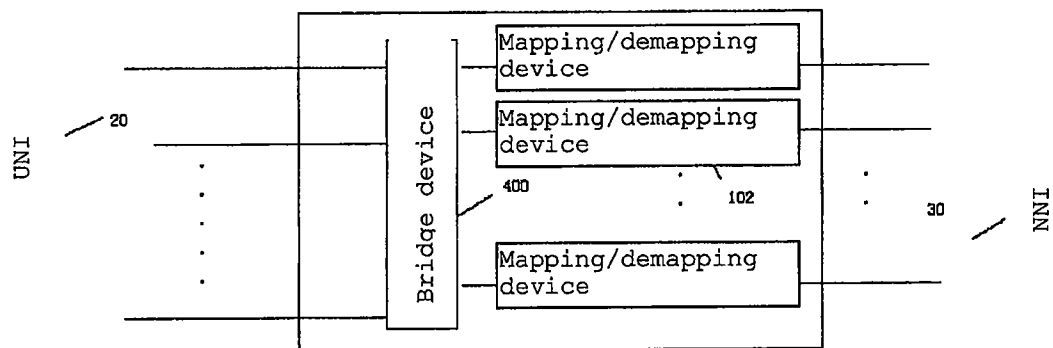


Fig.2A Prior Art

Replacement Sheet

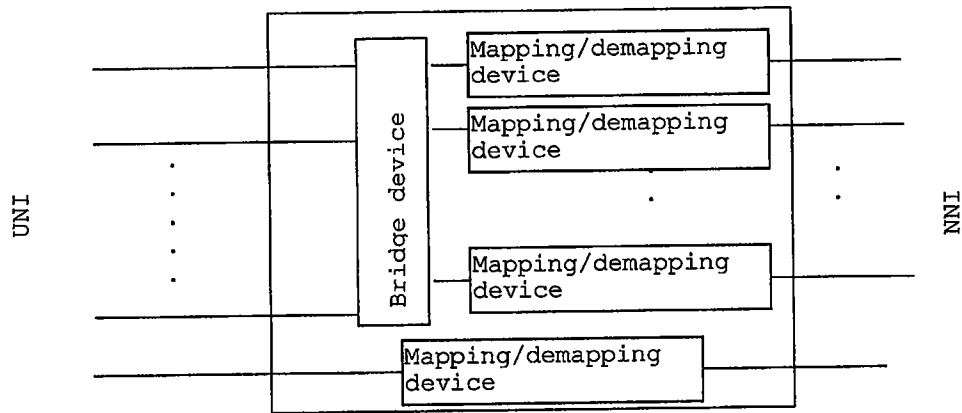


Fig.2B Prior Art

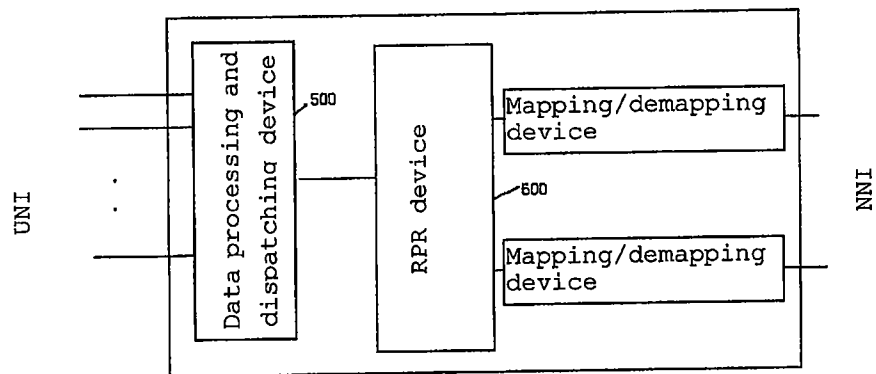


Fig.3 Prior Art

Replacement Sheet

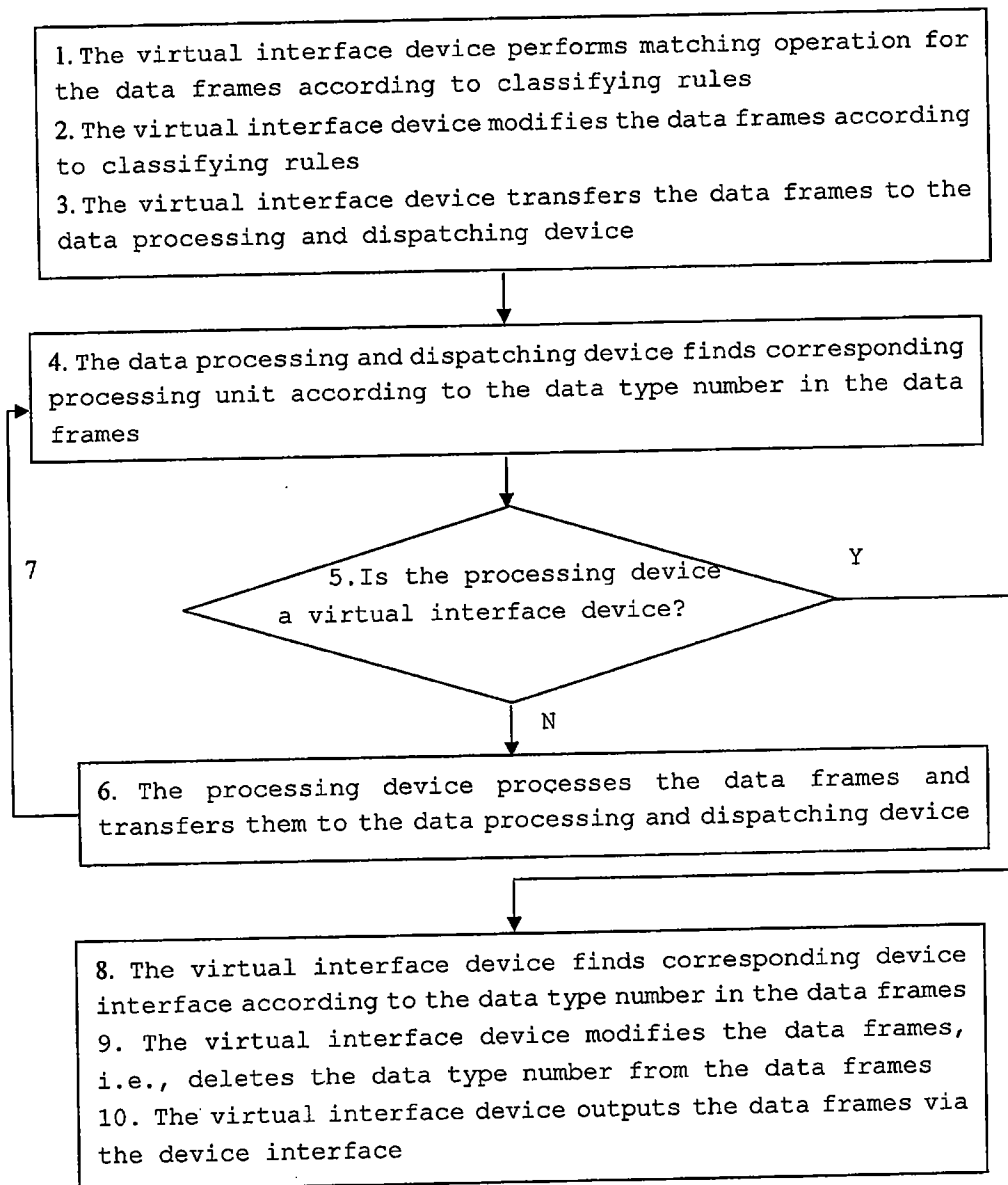


Fig.4(F)

Replacement Sheet

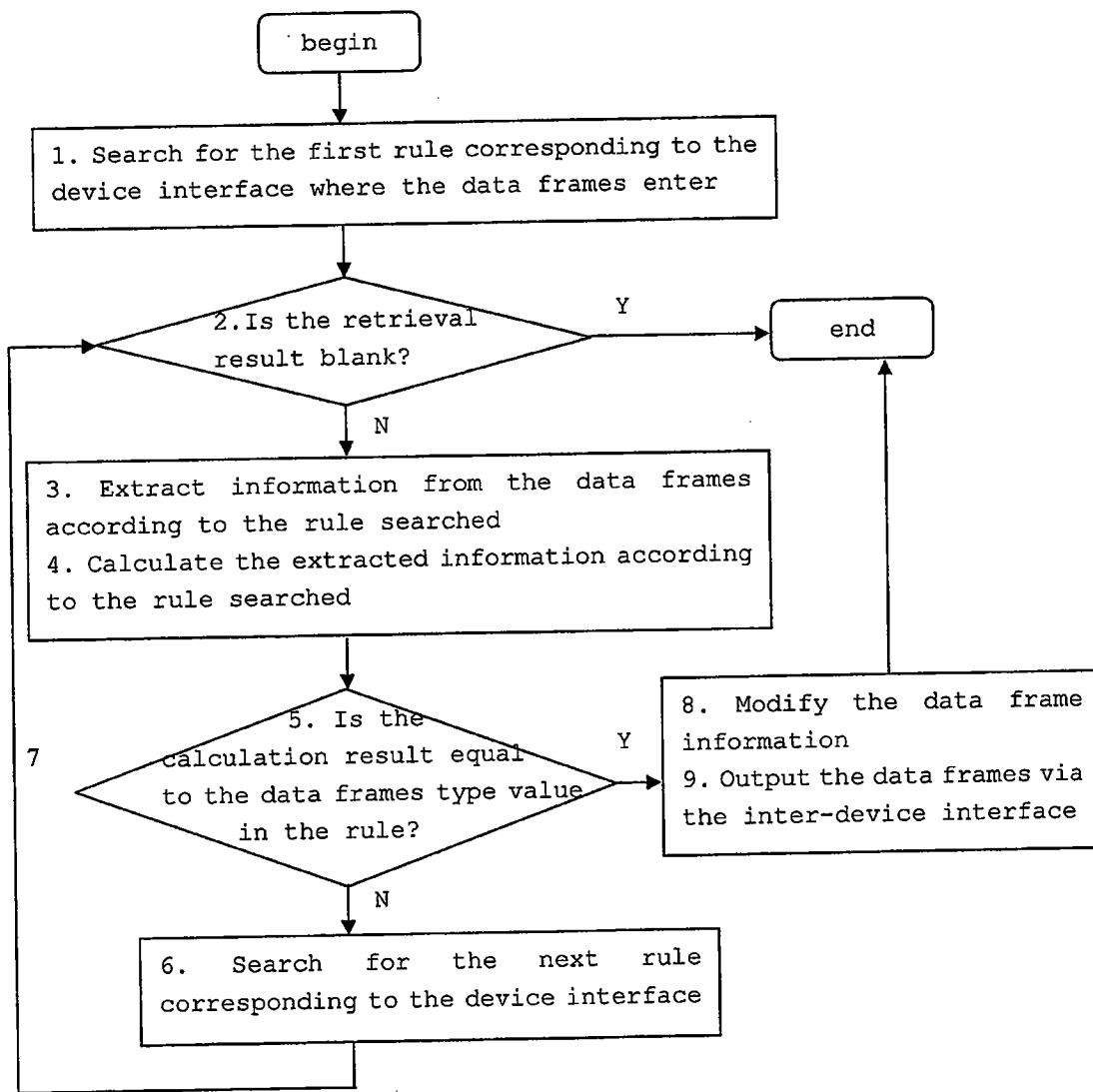


Fig.4A(F1)

Replacement Sheet

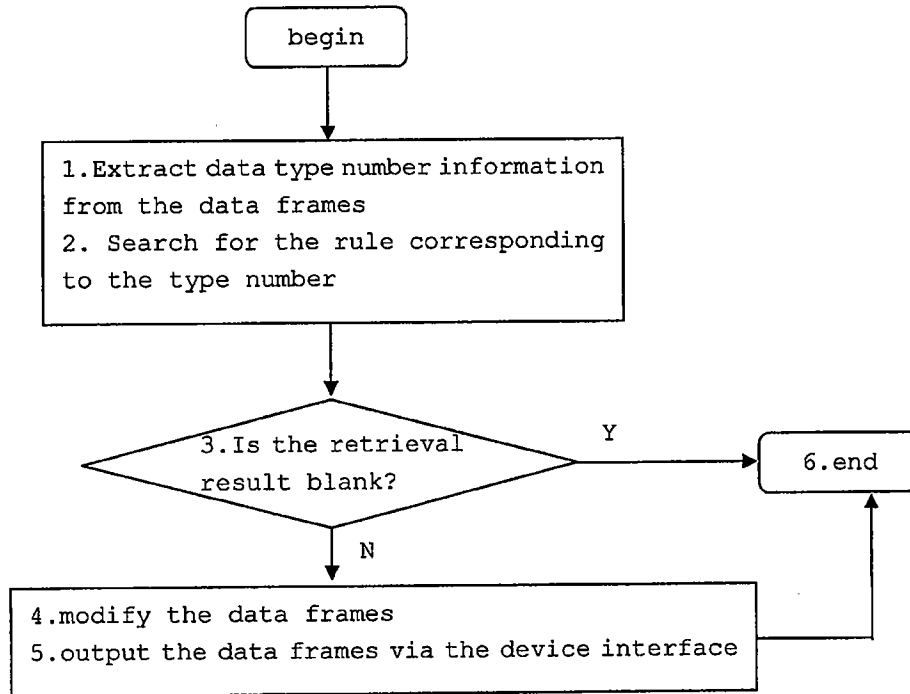


Fig.4A(F2)

Replacement Sheet

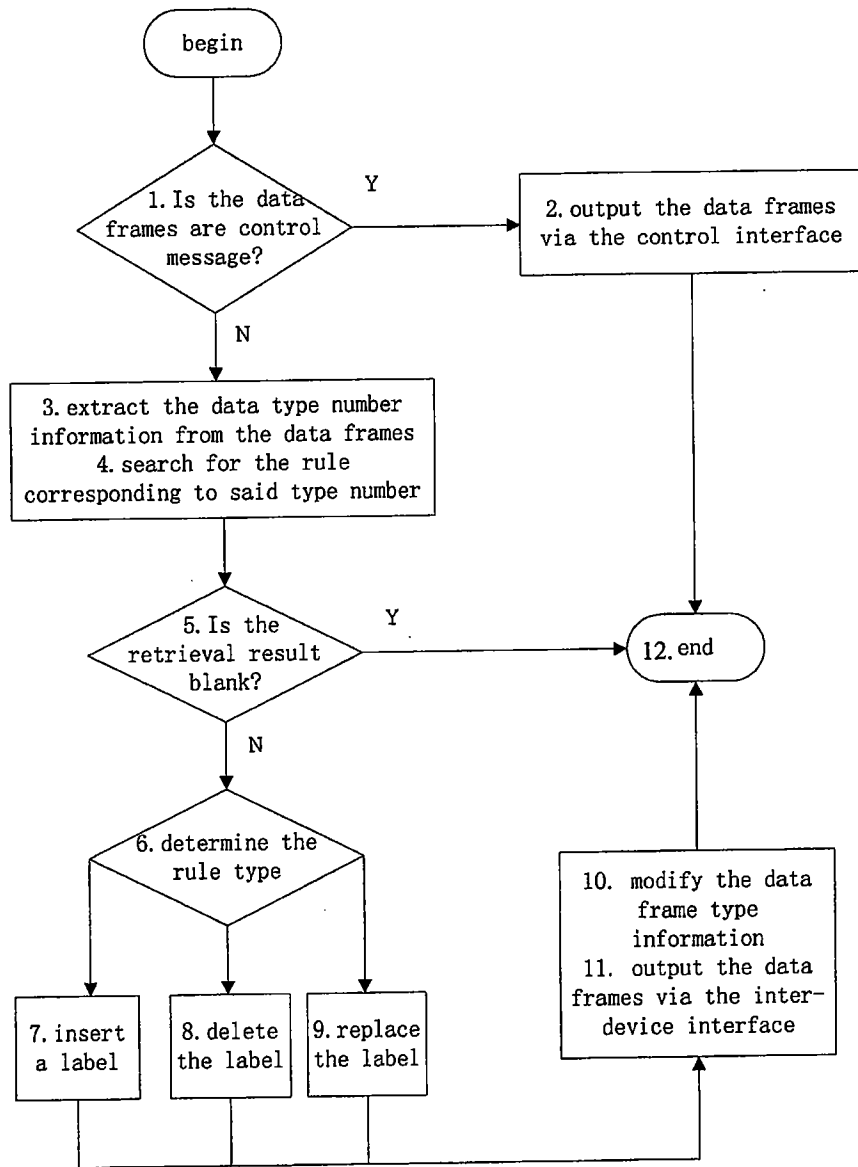


Fig.5(F)

Replacement Sheet

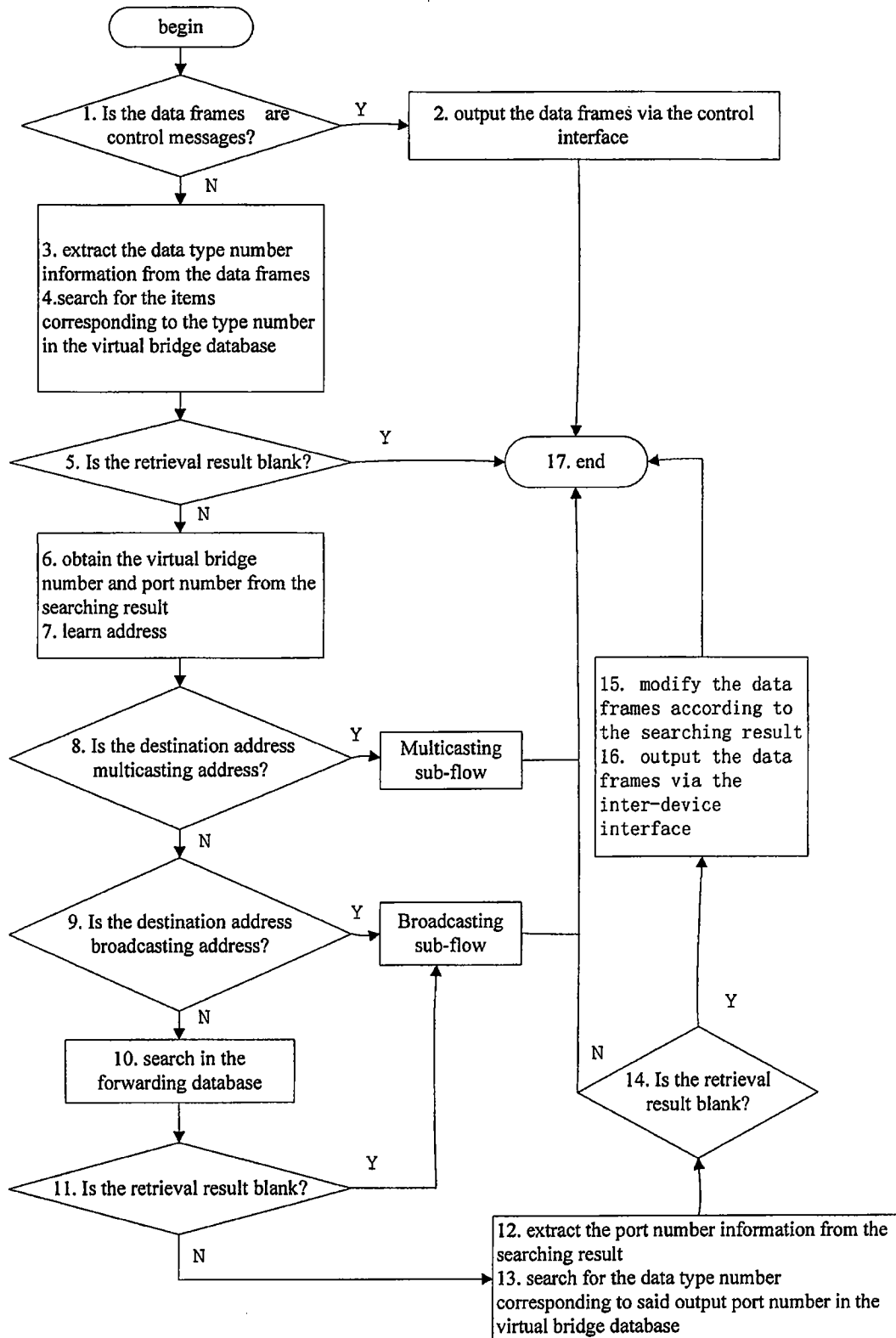


Fig.6(F1)

Replacement Sheet

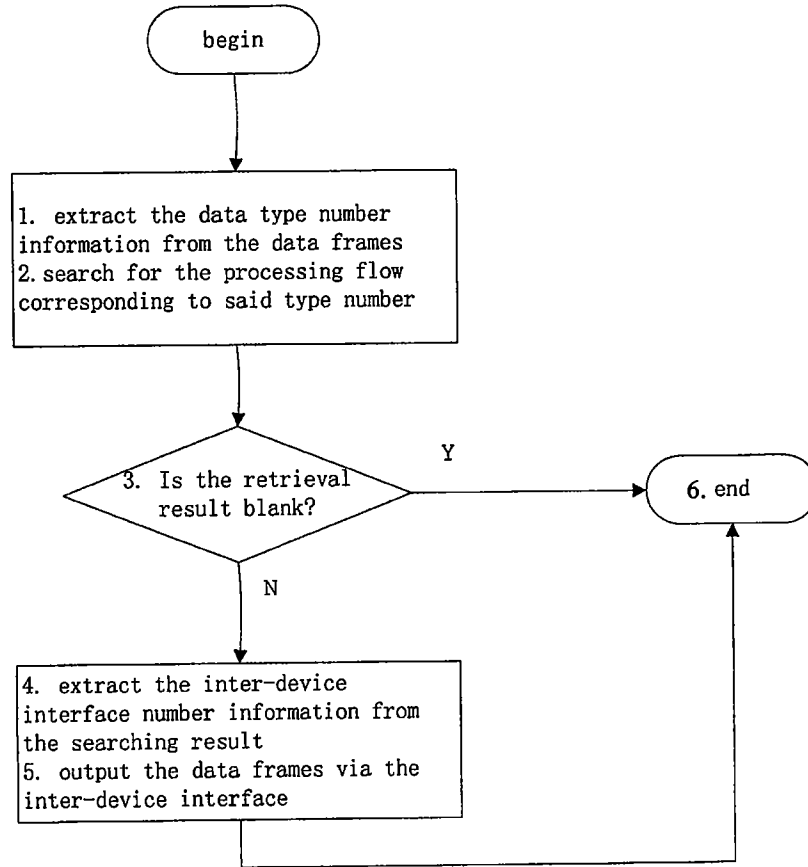


Fig.7(F)

SUPPORT DOCUMENT

11 Original Drawing Sheets as
filed on September 14, 2004.

Figs. 4, 4A, 5, 6, and 7 should be
added to printed patent.

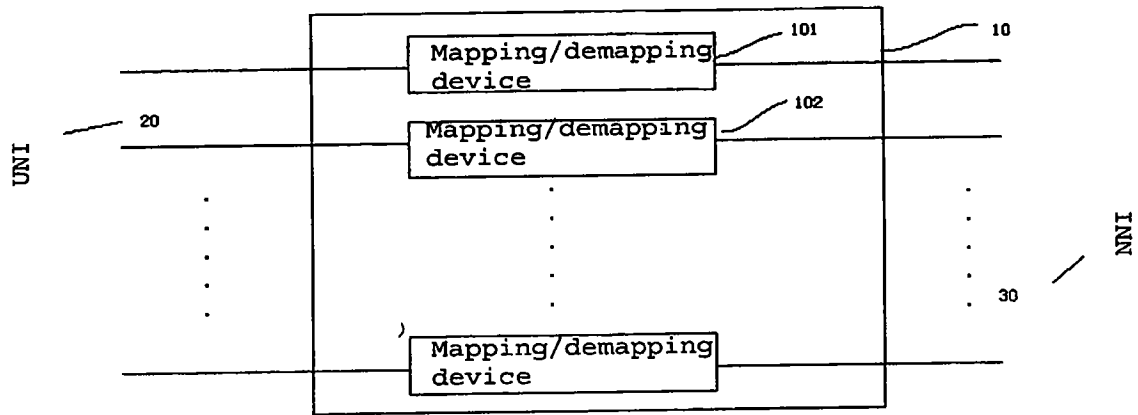


Fig.1

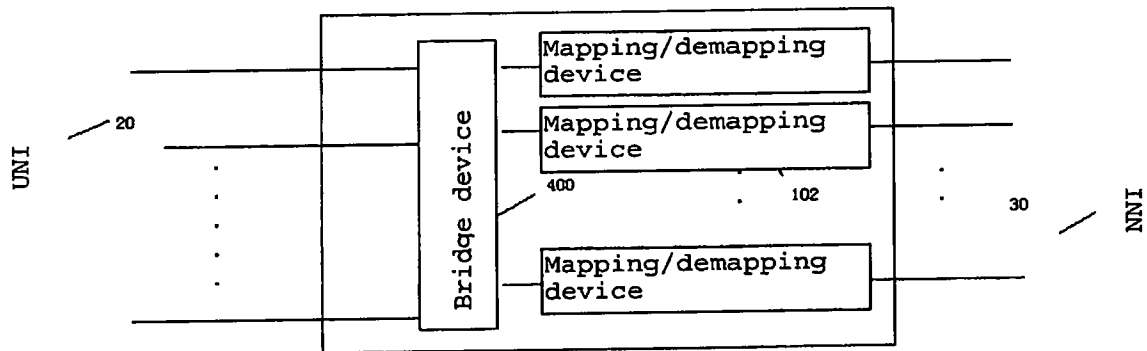


Fig.2A

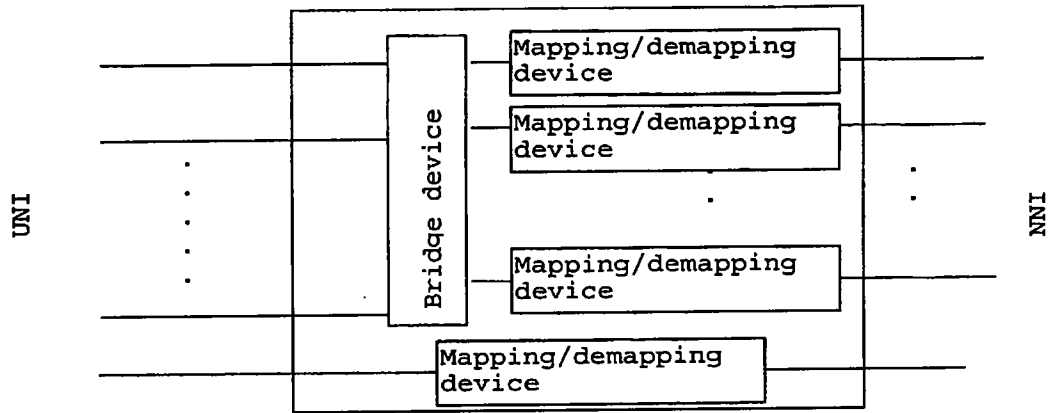


Fig.2B

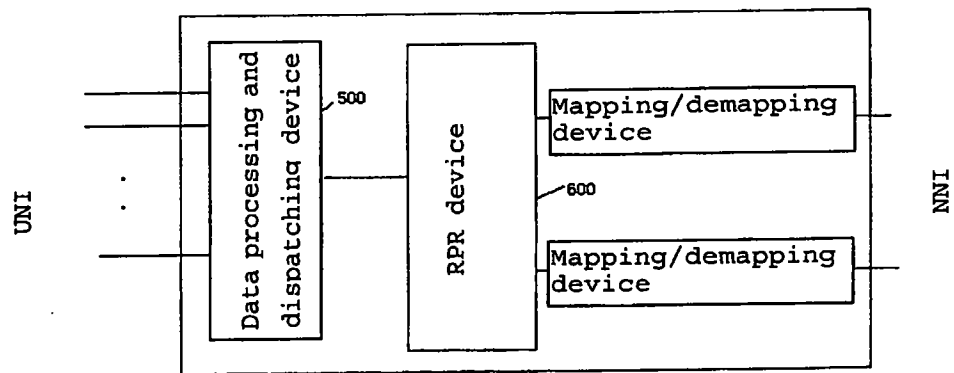


Fig.3

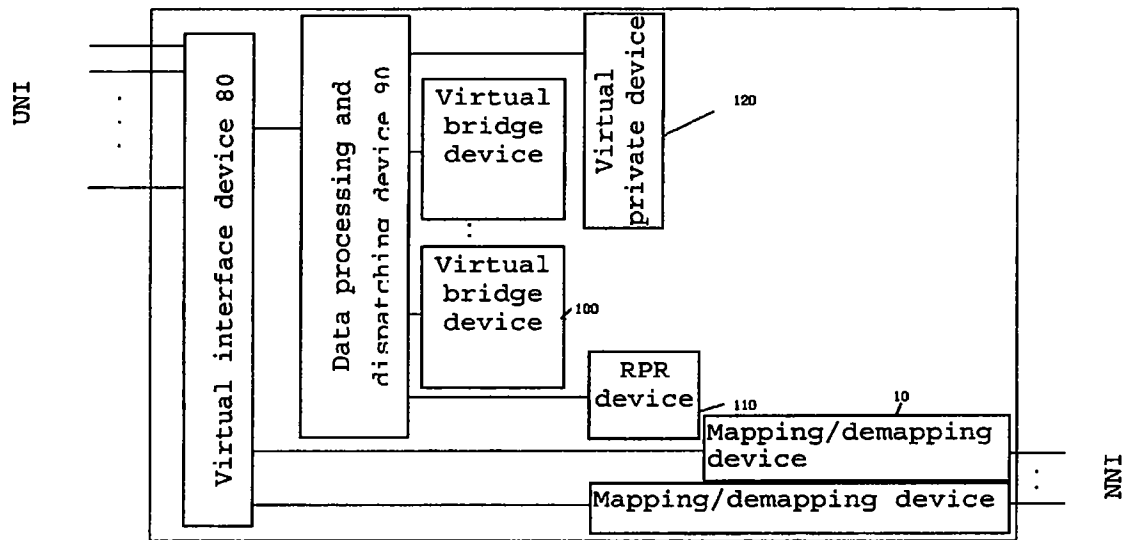


Fig.4

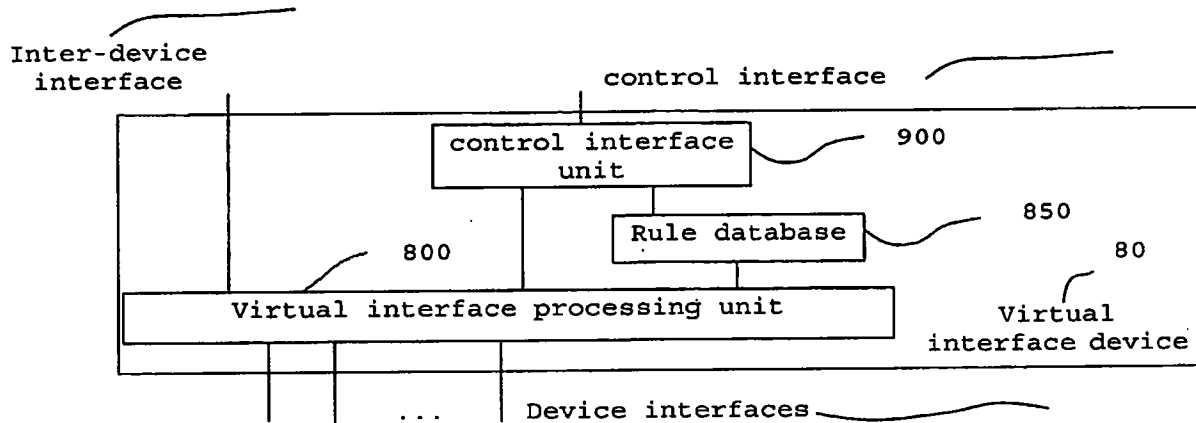


Fig.4A

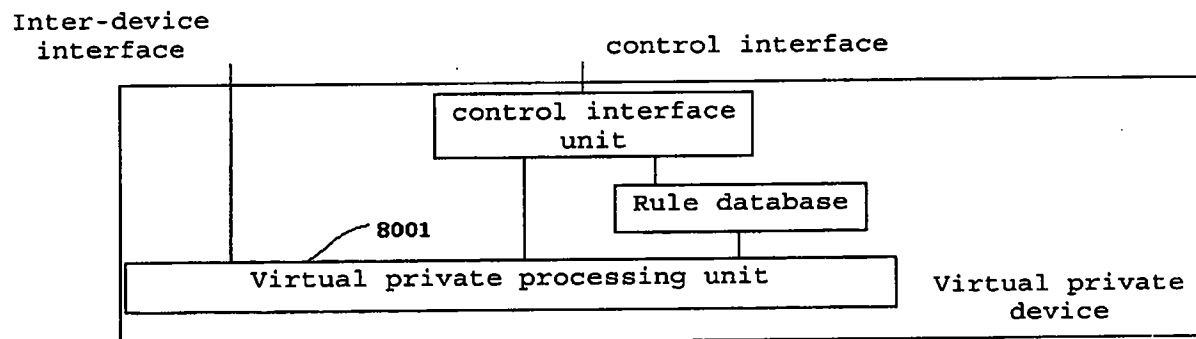


Fig.5

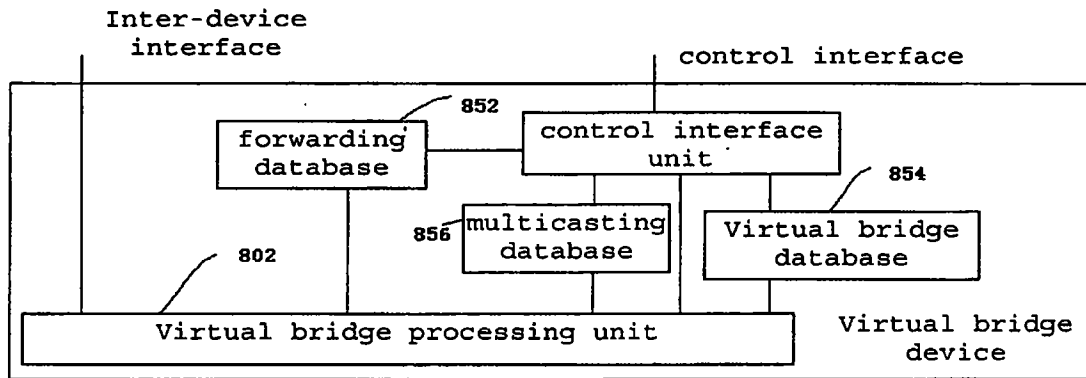


Fig.6

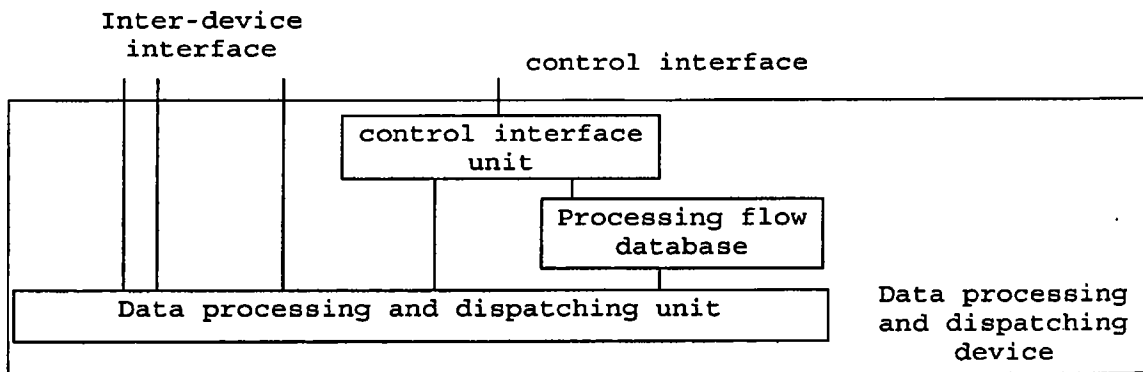


Fig.7

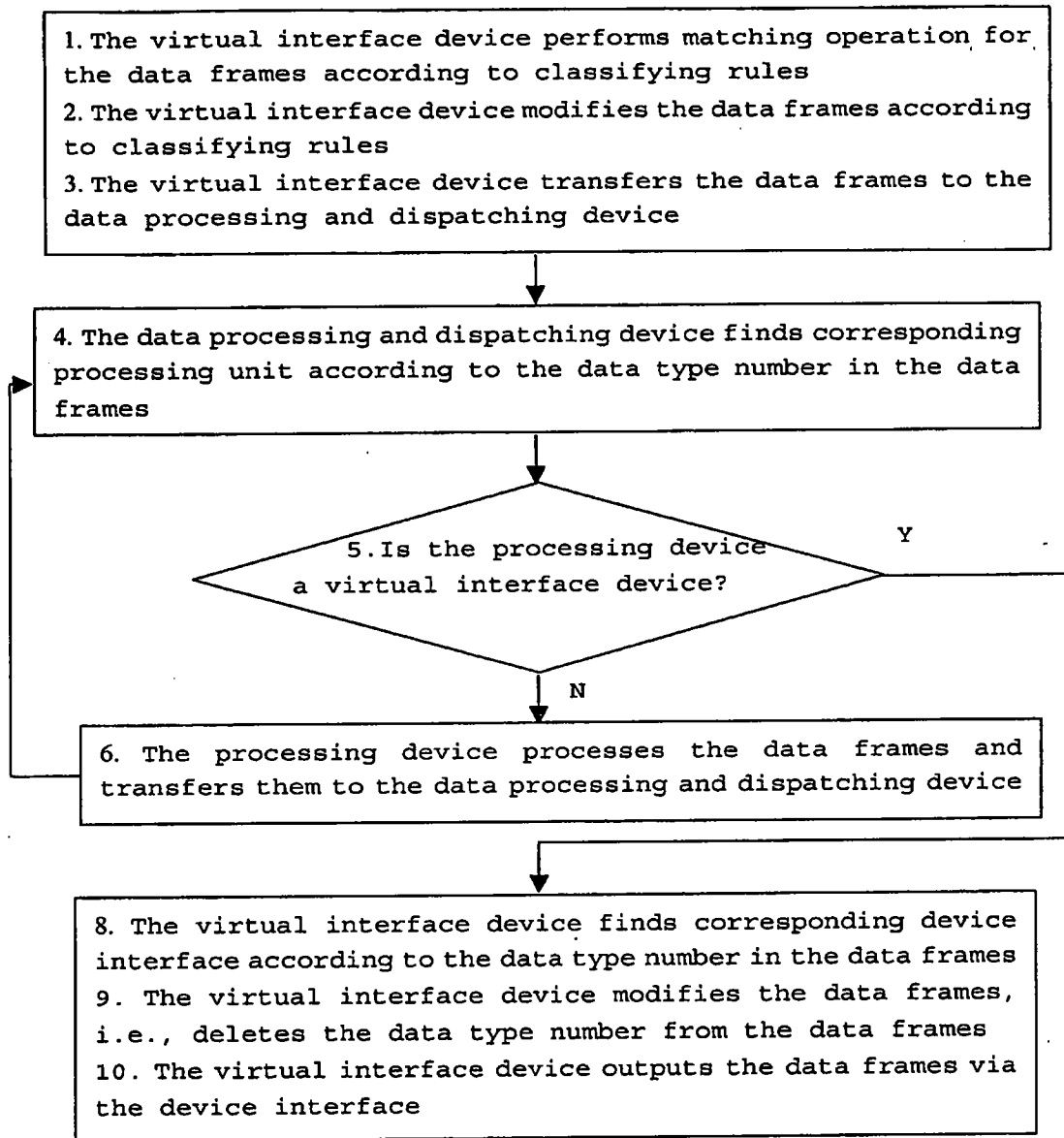


Fig.4(F)

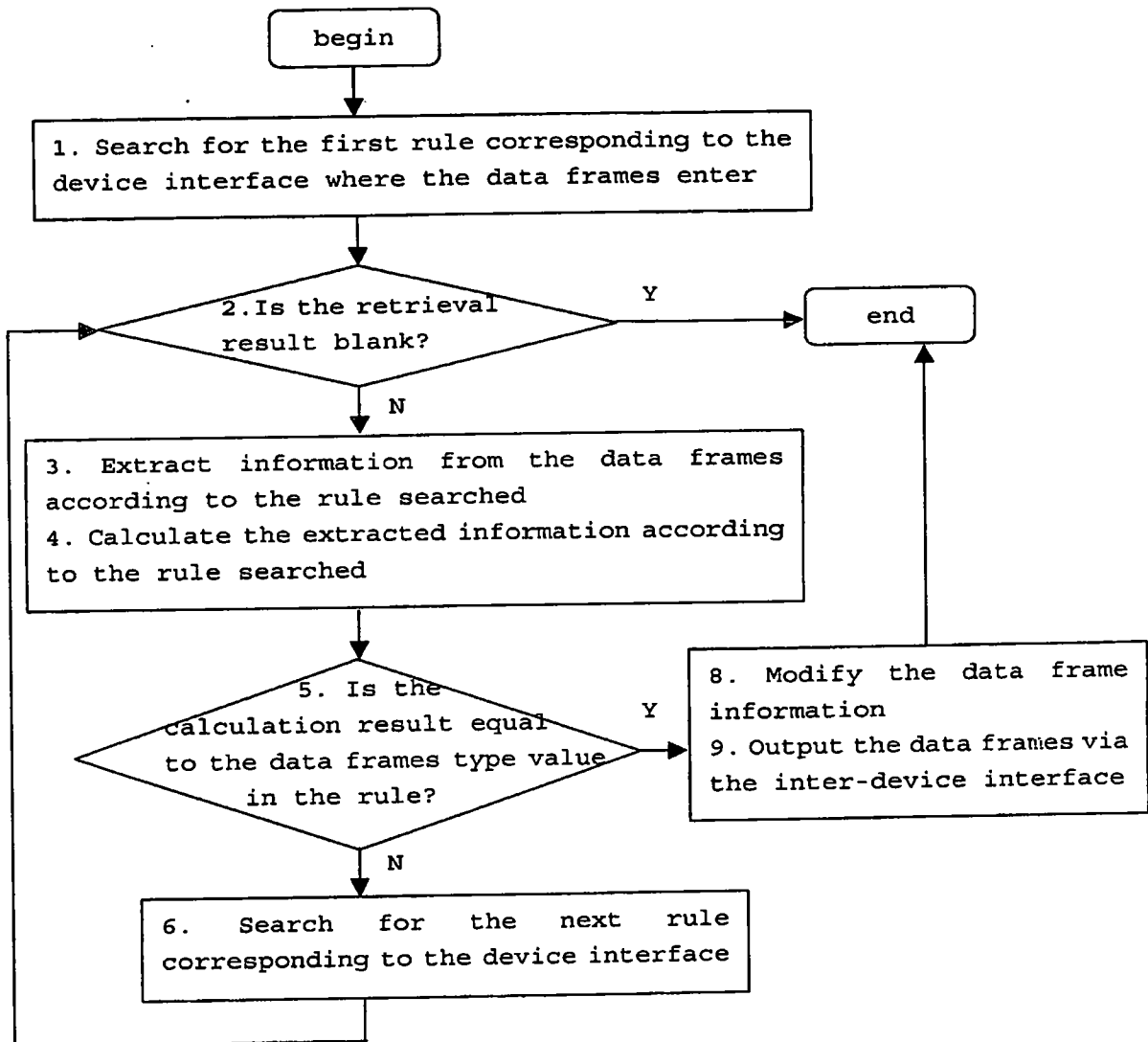


Fig.4A(F1)

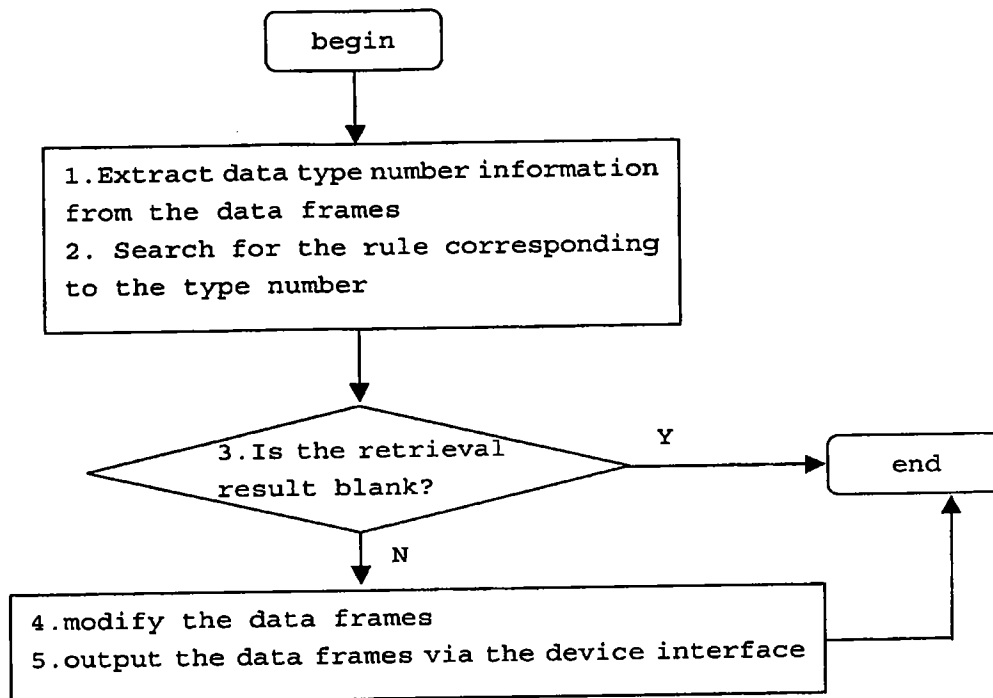


Fig.4A(F2)

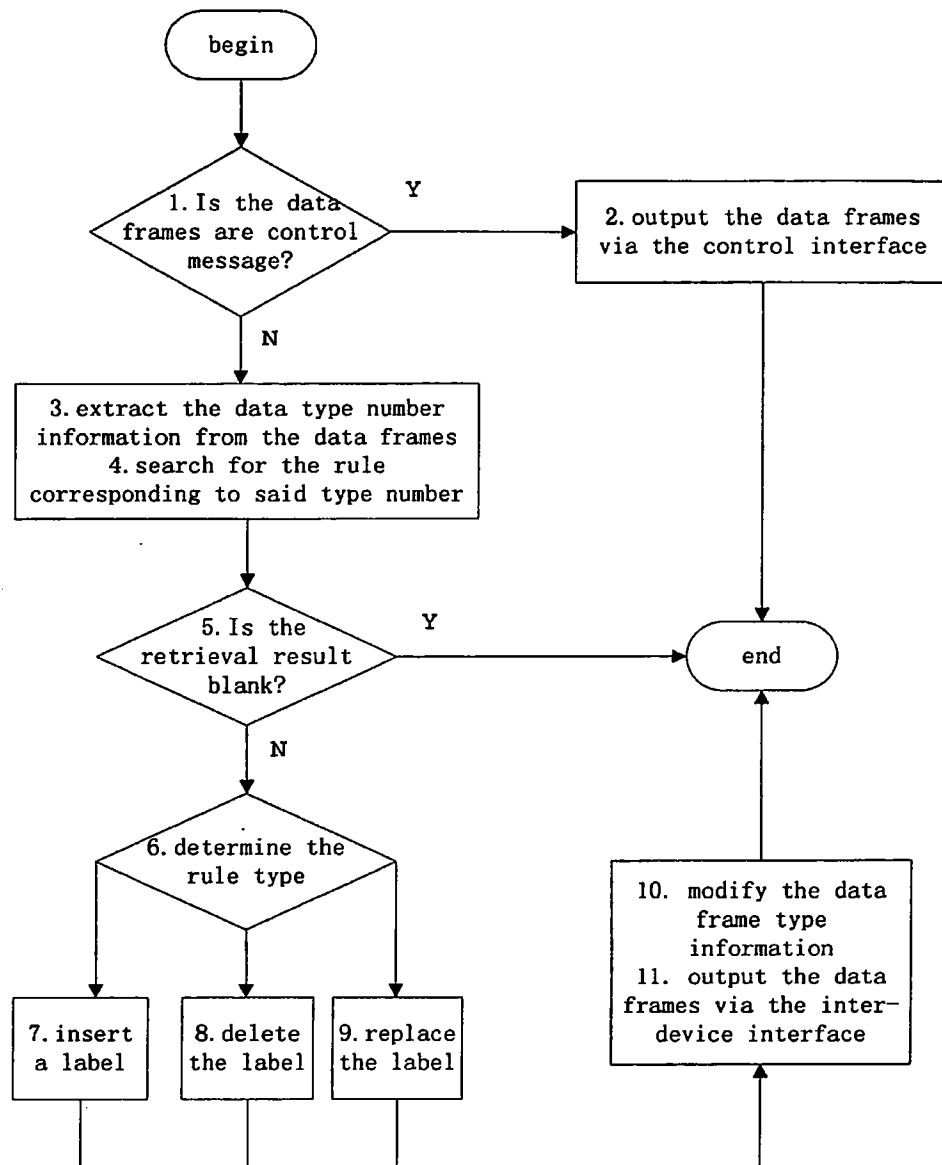


Fig.5(F)

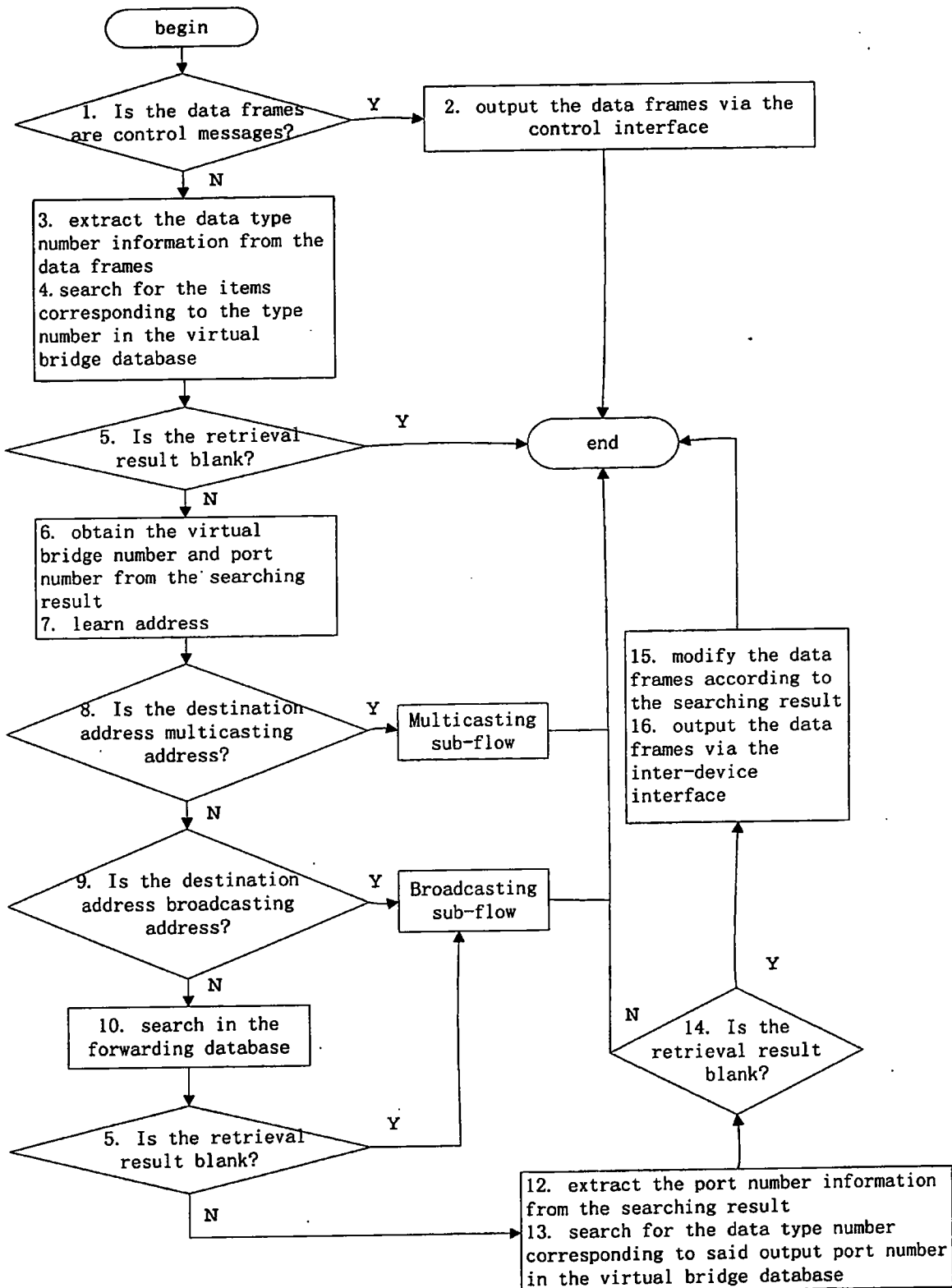


Fig.6(F1)

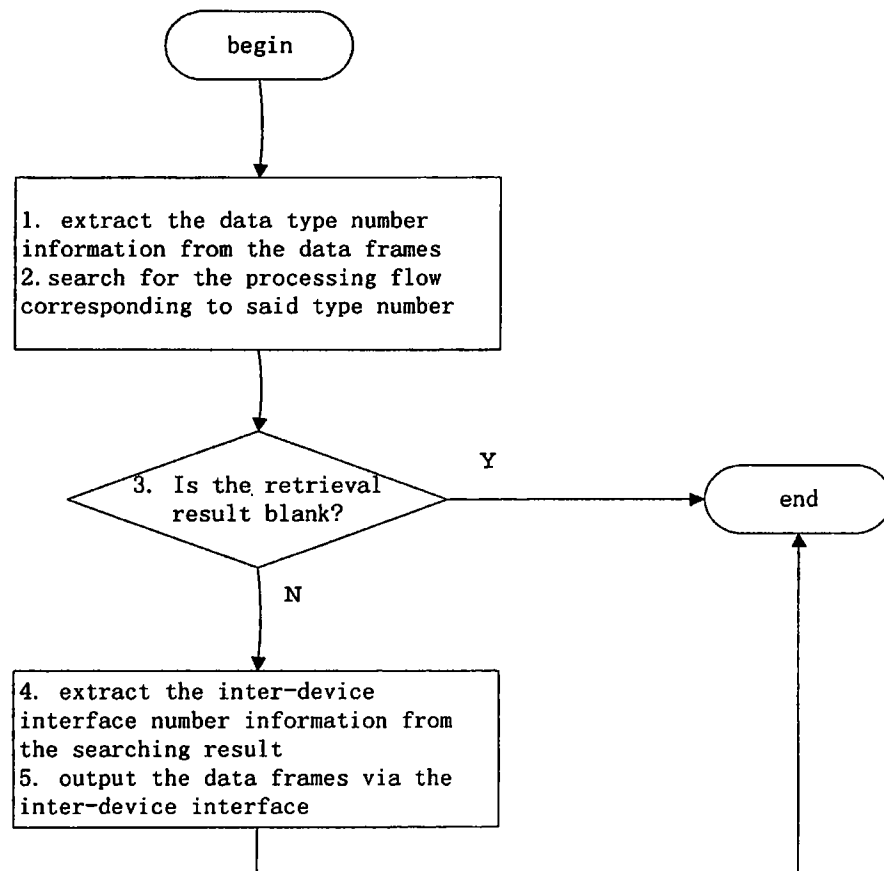


Fig.7(F)